

CLAIM AMENDMENTS

Claims 1-17. (canceled)

18. (new) Device for guiding a working element with two degrees of mobility comprising:

a base,

a first movable link comprising a first extreme and a second extreme,

a second movable link comprising a first extreme and a second extreme,

a first motor being housed in the base and connected kinematically with the first extreme of the first movable link by means of a first articulation,

a first guiding element which guides the first extreme of the first movable link along trajectories situated over a first straight line determined by said first guiding element,

a second motor also being housed in the base and connected kinematically with the first extreme of the second movable link by means of a second articulation,

a second guiding element which guides the first extreme of the second movable link along trajectories situated over a second straight line determined by said second guiding element and being parallel to the first straight line,

a third articulation which connects kinematically the second extremes of the first and second movable links, said second extreme of the first movable link being furthermore connected to the working element, and

a control algorithm for the first and second motors which controls speed and direction of each of the first extremes of the first and second movable links;

in order to accomplish a closed and therefore robust kinematic train formed by a triangle defined by the base and both first and second movable links which guides said working element with two degrees of mobility;

wherein the first and second guiding elements are arranged making coincide the first and second straight lines determined by said guiding elements in a unique same straight line over which the trajectories of both first extremes of the first and second movable links are situated; said arrangement of the first and second guiding elements having been provided in order to enable to simplify the control algorithm of the first and second motors, since said arrangement of the guiding elements enables to move the working element parallelly to the base by simply acting the first and second motors with a same speed and direction, also enabling to move the

working element perpendicularly to the base by acting the first and second motors with a same speed and opposite directions.

19. (new) Device for guiding a working element with two degrees of mobility, according to claim 18, wherein the working element is connected to the second extremes of the first and second movable links by means of a fourth articulation.

20. (new) Device for guiding a working element with two degrees of mobility, according to claim 19, wherein said device for guiding a working element with two degrees of mobility is additionally provided with a spring: a first extreme of said spring being connected to the first movable link, a second extreme of said spring being connected to the second movable link, and an intermediate point of said spring being connected to the working element, in order to maintain angular position of the working element with respect to the base in absence of external forces acting on said working element.

21. (new) Device for guiding a working element with two degrees of mobility, according to claim 18, wherein at least one kinematic connection selected from:
a kinematic connection between the first motor and the first extreme of the first movable link,
and
a kinematic connection between the second motor and the first extreme of the second movable link,
is self-blocking.

22. (new) Device for guiding a working element with two degrees of mobility, according to claim 18, wherein a plurality of working elements are connected kinematically to the same base, there being at least a first working element connected to first and second movable links whose lengths are larger than the lengths of first and second movable links corresponding to a second working element.

23. (new) Device for guiding a working element with two degrees of mobility, according to claim 5, wherein four working elements are connected kinematically to the same base:

at a first side of the base there being:

a first working element connected to long first and second movable links, and
a second working element connected to short first and second movable links; and,
at a second side of the base opposite to the first side of the base there being:
a third working element connected to long first and second movable links, and
a fourth working element connected to short first and second movable links.